



# Hong Kong: Telecommunications & Broadcasting

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## Summary

The Hong Kong Government fully liberalized its local Fixed Telecommunications Network Services (FTNS) in 2003. There is no pre-set limit on the number of FTNS licenses issued. As of July 2007, 79% of residential households were able to enjoy choice of at least two alternative local fixed networks. On the mobile communications front, the market is one of the most competitive in the world. The introduction of mobile number portability service in 1999 prevents any single mobile operator from dominating the market. Of the five mobile operators running multiple networks, four operators launched Third Generation (3G) networks in 2004. Multimedia convergence through mobile phones is evolving rapidly. Technological innovation has enabled 24-hour live streaming news, mobile TV with over 20 channels and other mobile content, which is gaining in popularity. In March 2008, the market penetration of mobile phones in Hong Kong was estimated to be 154.4 percent, the highest mobile penetration rate in the world (with a population of approximately 7 million). With its high mobile penetration rate, Hong Kong is an ideal test bed for the launch of new wireless applications, products and services. Opportunities for U.S. telecom companies exist in: smart phones, content for 3G networks, wireless multimedia and security technologies.

Hong Kong's telecommunications equipment imports in 2007 reached USD 22.5 billion. The United States is the 5<sup>th</sup> largest supplier, supplying USD 625 million or approximately 3% of Hong Kong's imports, following China, Singapore, Japan, and Malaysia.

Broadcasting also provides opportunities for US companies providing content and digital TV technology and equipment to broadcasters. With more than 2.23 million households (100%) tuning in to television broadcasts on a regular basis, television is a significant feature of life for people in Hong Kong. There are over hundreds of domestic and regional TV channels broadcasting in a range of languages, including Free-to-Air commercial channels, pay TV channels and a variety of Free-to-Air satellite channels. In 2007, Hong Kong's broadcasting equipment imports reached USD 18.6 billion. The United States is the 4<sup>th</sup> largest supplier, supplying USD 493 million or approximately 2.6% of Hong Kong's imports, following China, Singapore, and Malaysia.

## Market Demand

### Fixed Line

The local fixed carrier services market was fully liberalized in 2003. As of March 2008, there were almost 3.7 million exchange lines. The telephone density is 53.2% by population, among the highest in the world. There is no pre-set limit on the number of licenses issued and deadline for applications. Furthermore, there is no specific requirement on network rollout and investment. There are currently ten wireline based Fixed Telecommunications Network Services (FTNS) licensees and one wireless based (FTNS) licensees in Hong Kong, they are:

1. PCCW-HKT Telephone Limited
2. New World Telecommunications Limited

3. Wharf T& T Limited
4. Hutchison Global Communications Limited
5. Hong Kong Broadband Network Limited
6. Towngas Telecommunications Fixed Network Limited
7. CM TEL (HK) Limited
8. TraxComm Limited
9. HKC Network Limited
10. Hong Kong Cable Television Limited
11. SmarTone Communications Limited

As a result of the open competition in the local fixed carrier services market, the Hong Kong fixed line market is very competitive. Fixed-line users can make unlimited number of calls within Hong Kong on payment of a fixed monthly fee.

### **Mobile/Wireless**

Competition in public mobile services is vibrant. Currently, there are five mobile network service operators (Hong Kong CSL, Hutchison, PCCW, SmarTone and China Mobile Peoples) operating 14 networks. Three operators holding both GSM 900 and GSM 1800 licenses have integrated their networks and launched dual band services. Four operators (Hong Kong CSL, Hutchison, SmarTone, and PCCW) have launched 3G networks. In addition to the existing networks, OFTA (Office of the Telecommunications Authority) has granted the fifth 3G license to PCCW for the provision of CDMA2000 mobile telecommunications services, which will be available in Hong Kong in November 2008.

With the introduction of number portability in 1999, Hong Kong's mobile phone market growth has accelerated. Towards the end of 1999, the number of mobile subscriptions surpassed that of fixed lines. The high penetration rate of Hong Kong's mobile phone market is mainly due to the low prices for handsets and low rates for mobile services. In March 2008, there were 10.75 million mobile subscribers in Hong Kong, representing a market penetration rate of 154.4 percent (population size is 7.02 million), the highest mobile penetration rate in the world. Among these 10.75 million subscribers, 2.8 million were 3G/3.5G subscribers. Other than basic voice services, data services such as short messaging, mobile internet services, all sorts of download services, multimedia services, video call services and mobile TV services are commonly available and are becoming popular among consumers. With the launch of 3.5G services utilizing High Speed Downlink Packet Access (HSDPA) technology by all four 3G operators in August 2007, subscribers can easily download and upload large files including email attachments, enjoy faster and higher quality video-streaming and downloading, as well as experience high-speed web-browsing at a speed up to 7.2Mbps.

### **Mobile Virtual Network Operator (MVNO) Services**

When granting the 3G license, OFTA has stipulated that all 3G operators must reserve at least 30% of their network capacity for MVNO services, which in turn must operate their own telecom switch, thus created new market opportunities for operators. OFTA had issued seven MVNO licenses by end of 2007. The Licensees are Trident Telecom Ventures Ltd., China Motion Telecom (HK) Ltd., China Unicom International Ltd., China Hong Kong Telecom Ltd., CITIC Telecom 1616 Ltd., Telecom Digital Mobile Ltd., and IMC Networks Ltd.

The great demand for mobile data and multimedia services has created additional demand for network hardware and software, support services, consulting, and content services for U.S. companies.

### **Broadcasting**

Broadcasting may provide more opportunities for U.S. companies providing content and digital TV technology to local channels.

With more than 2.23 million households (100%) tuning in to television broadcasts on a regular basis, television is a significant feature of life for people in Hong Kong. There are over hundreds

of domestic and regional TV channels broadcasting in a range of languages, including Free-to-Air commercial channels, pay TV channels and a variety of Free-to-Air satellite channels. Under the Hong Kong Broadcasting Ordinance, there are 3 categories of television program services:

- **Domestic Free TV Program Services:** domestic free television program services are intended or available for reception by more than 5,000 domestic premises free of charge in Hong Kong and primarily target Hong Kong. There are two licensees under the domestic free TV program services, namely TVB and ATV, each broadcasts 2 free-to-air channels. These two terrestrial TV broadcasters were required by the Hong Kong Government to launch Digital Terrestrial TV (DTT) at the end of 2007 and to achieve at least 75% digital broadcasting in 2008. With the launch of DTT broadcasting, ATV and TVB will simulcast their existing four television channels in digital format, and launch new free channels on standard television (SDTV) and high definition television (HDTV). The two operators will continue to broadcast the four existing channels in analogue format, so viewers can choose when to switch to digital broadcasting at their own pace. Subject to further market and technical studies, the Government aims to switch off analogue broadcasting in 2012.
- **Domestic Pay TV Program Services:** refers to television program services, which are intended or available for reception by more than 5,000 domestic households or hotel rooms in Hong Kong on payment of a subscription and primarily target Hong Kong. Under the Pay TV Program Services License, all three existing licensees are using Internet Protocol Television (IPTV) delivered by broadband connection. The three licensees are: Hong Kong Cable Television Limited (101 channels); PCCW Media Limited (133 channels), and TVB Pay Vision Limited (44 channels).
- **Non-Domestic TV Program Services:** Non-domestic television program services do not primarily target Hong Kong. Most of these licensees are using satellite broadcasting. There are 16 licensees offering hundreds of channels targeting for non-local viewers.

## Market Data

**Table 1: Fixed Line In Service And Teledensity**

Year	Fixed Line in Service	Teledensity
2004	3,806,000	54.8%
2005	3,792,900	54.1%
2006	3,835,900	54.8%
2007 (April)	3,855,281	55.1%
2008 (March)	3,736,663	53.2%

Source: Office of Telecommunications Authority, Hong Kong

**Table 2: Mobile Subscribers Penetration Rate**

<b>Year</b>	<b>Mobile Subscribers in Service</b>	<b>Mobile Subscribers Penetration Rate</b>
2004	8,157,960	118%
2005	8,544,255	122.6%
2006	9,444,140	136%
2007 (April)	9,469,684	137.2%
2008 (March)	10,751,622	154.4%

Source: Office of Telecommunications Authority, Hong Kong

**Table 3: 3G Mobile Subscribers**

<b>Year</b>	<b>No. of 3G Mobile Subscribers</b>	<b>3G Subscribers as a Proportion to Total Mobile Subscribers</b>
2005	636,000	7.4%
2006	1,331,700	14.1%
2007 (April)	1,549,701	16.4%
2008 (March)	2,824,074	38.1%

Source: Office of Telecommunications Authority, Hong Kong

**Table 4: MVNO Subscribers (2005 – 2007)**

<b>Year</b>	<b>No. of Subscribers</b>
2005	529,600
2006	689,700
2007	724,200

Source: Industry sources, Global Mobile Data from Budde.com

**Table 5: Broadband, Pay TV & IPTV Statistics (End of March 2008)**

No. of Households	2,466,148
No. of Broadband Subscribers	1,898,934
Broadband Penetration Rate	77%
No. of PayTV Subscribers (end of 2006)	1,684,000
IPTV Subscribers	1,000,000
IPTV Penetration Rate	40%

Source: The Office of the Telecommunications Authority Hong Kong

### Prospective Buyers

Telecom Network Operators - Through a series of acquisitions, the number of mobile operators has dropped from eight to five. Following the merger of CSL and New World Mobility, the new company is estimated to have the largest number of mobile subscribers in 2007 (32.3% or 2,619,700), followed by 3 Hutchison (around 24.6% or 1,997,000), Peoples Telephone (17.7% or 1,435,900), Smartone-Vodafone (13.3% or 1,079,600) and Sunday/PCCW (12% or 974,400).

**Table 1 – Mobile Operator Market Shares and annual change – September 2007**

Operator	Technology	Launch	Subscribers 2007	Annual change(%)	Market Share (%)
CSL New World	WDMA	2004	266,100	125.5	32.3
CSL New World	GSM 900/1800	1993	2,353,600	-5.2	
3 (Hutchinson)	WCDMA	2004	958,000	43.8	24.6
3 (Hutchinson)	GSM 900/1800	1995	1,038,000	-11.8	
3 (Hutchinson)	CDMA 800	1994	1,000	-77.8	
Sunday (PCCW)	WCDMA	2006	121,400	1.2	12
Sunday (PCCW)	GSM 1800	1997	853,000	8.6	
SmarTone-Vodafone	GSM 900/1800	1997	834,900	-6.3	13.3
SmarTone-Vodafone	WCDMA	2004	244,700	33.4	
Peoples Telephone	GSM 1800	1993	1,435,900	0.4	17.7
Total			8,106,600	6.2%	100

Source: Industry sources, Global Mobile Data from Budde.com

## Broadcasting Companies

TV Services	Company	No. of Channels/Transmission Technology
Domestic Free Program	Asia Television Ltd. (ATV)	2 Analogue; 8 Digital
	Television Broadcasts Ltd. (TVB)	2 Analogue; 5 Digital
Domestic Pay Program	Hong Kong Cable Television Ltd.	101 (Hybrid fiber-coaxial & IP)
	PCCW Media Ltd.	133 (IP)
	TVB Pay Vision Ltd.	44 (Satellite & IP)
Non-Domestic Program	Starbucks (Hong Kong) Ltd.	1 (Satellite)
	Turner International Asia Pacific Ltd.	6 (Satellite)
	China Entertainment TV Broadcast Ltd.	1 (Satellite)
	i-Cable Satellite TV Ltd.	1 (Satellite)
	Pacific Century Matrix (HK) Ltd.	15 (Satellite)
	Skywave TV Co. Ltd.	40 (Satellite)
	Auspicious Colour Ltd.	3 (Satellite)
	Phoenix Satellite TV Co. Ltd.	3 (Satellite)
	Asia Times Online Ltd.	7 (Satellite)
	Starvision Hong Kong Ltd.	36 (Satellite)
	TVB Pay Vision Ltd.	29 (Satellite)
	APT Satellite TV Dev. Ltd.	39 (Satellite)
	Sun Television Cybernetworks Enterprise Ltd.	1 (Satellite)
	MATV Ltd.	1 (Satellite)
	Asia Television Ltd.	
	Times International Media Group Ltd.	

**Best Prospects**

With its high mobile penetration rate, Hong Kong is an ideal test bed for the launch of new wireless applications, products and services. Opportunities for U.S. telecom companies exist in the following areas:

- Optic fiber cables, fiber cables and switches
- Smart phones
- Content for 3G networks
- Wi-Fi equipment
- Security technologies

Broadcasting also provides opportunities for U.S. companies providing content and digital TV technology and equipment to broadcasters.

**Market Entry Strategies**

Working with local agents/distributors:

One of the best ways to sell telecom products in the Hong Kong market is through the use of agents or distributors. It is also an excellent way of minimizing the initial investment in the market. Working with agents and distributors in Hong Kong is very much like working with an agent in the United States. Hong Kong has no special legislation regarding agents and distributors. Virtually anything that both sides can agree to and put into a written contract is acceptable and enforceable, including restrictions on territory and a grace period for termination of the agreement.

#### Trade Promotion Activities:

Many promotional vehicles are open to suppliers to introduce and develop their services in the Hong Kong market. These include:

- Trade fairs and exhibitions
- Advertising in the media and other public relations activities
- Holding seminars
- In-store promotions
- Joint promotions with wholesale and retail outlets

#### Market Access Issues and Obstacles

Hong Kong is a duty free port, and the Hong Kong Government does not levy any import tariffs on telecom products. For inquiries on specific products, please contact:

Customs and Excise Department  
8th Floor, Harbor Building  
38 Pier Road  
Central, Hong Kong  
Tel: (852) 2852-3324  
Fax: (852) 2541-9827 (Dutiable Commodities Division)

#### Standards

For users (3G and 2G operators) who pay the spectrum utilization fee (SUF), users are given the right to use the assigned frequencies for a period similar to the validity period of most licenses, i.e. 15 years. Other frequency users must pay an annual license fee to the Office of the Telecommunications Authority (OFTA). Once the license fee is paid, users are usually allowed to continue the use of the frequencies specified in the license. However, under section 321 of the Telecommunications Ordinance, the Telecommunications Authority may withdraw or vary the frequency assignments of the non-SUF users by giving reasonable notice prior to withdrawal. OFTA usually gives one to three years prior notice in such cases.

OFTA utilizes a technology-neutral approach. However, OFTA does specify the technical standards in the schedule of licenses. The licensee may request OFTA for changes to the technical standard in the schedule. OFTA will generally approve changes as long as the standard to be used is an open and non-proprietary standard (e.g. regional standard or international standard).

Spectrum users are required to pay license fees. OFTA determines the license fee level by calculating the amount necessary to recover OFTA's administrative costs. These administrative costs include licensing, clearing interference, enforcement against illegal radio users, and various other administrative activities.

No fees are required for the following uses of the frequencies:

- (a) Frequencies/uses exempted under the relevant exemption orders under the Telecommunications Ordinance
- (b) Frequencies/uses licensed under the class licenses created under the Telecommunications Ordinance

It is OFTA's stated objective to encourage the efficient use of the radio frequency spectrum. One way OFTA achieves this objective is by allocating spectrum in a manner that allows access for all potential spectrum users. In this way, multiple users can share use of the same spectrum space. Under the exemption orders of the Telecommunications Ordinance, OFTA has exempted a number of frequency bands for various applications including radio frequency identification, industry, scientific and medical applications, cordless telephones, low power devices, mobile satellite services, WiFi, 409 MHz walkie talkie, etc.

### **Radiation**

A number of major mobile phone manufacturers have taken the initiative to publish data regarding the "Specific Absorption Rate" or S.A.R. of their products. Although OFTA's type approval specifications currently do not stipulate the radiation safety requirement, it is noted that the majority of approved mobile phones being marketed in Hong Kong are actually designed and made to meet the International Commission on Non-Ionizing Radiation Protection ("ICNIRP") and the American National Standards Institute/Institute of Electrical and Electronics Engineers ("ANSI/IEEE") standards.

### **Labeling**

At present, Hong Kong does not impose any labeling requirement for mobile phones. Compliance with technical performance is now safeguarded by a type approval procedure. Under the type approval procedure, manufacturers or suppliers have to apply to the Office of the Telecommunications Authority (OFTA) for type approval of mobile phones against the HKTA specifications before their phones are marketed in Hong Kong.

### **Trade Events**

#### **GSM Asia 2008**

Dates: Nov 18-20, 2008

Venue: Venetian, Macau

Organizer: GSM Events Limited

Website: <http://www.mobileasiacongress.com>

#### **Carriers World Asia 2009**

Dates: March 17-19, 2009

Venue: Conrad Hotel, Hong Kong

Organizer: Terrapinn Pte Ltd

Website: <http://www.terrapinn.com/2009/cwa/>

#### **International ICT Expo 2009**

Dates: April 13-16, 2009

Venue: Hong Kong Convention and Exhibition Center

Organizer: Hong Kong Trade Development Council

Website: <http://ictexpo.tdctrade.com>



Broadband World Forum Asia 2009  
Dates: May 20-22, 2009  
Venue: Hong Kong Convention and Exhibition Center  
Organizer: International Engineering Consortium  
Website: [http://www.iec.org/events/2009/bbwf\\_asia/](http://www.iec.org/events/2009/bbwf_asia/)

CommunicAsia 2009  
Dates: June 16-19, 2009  
Venue: Singapore Expo  
Organizer: Singapore Exhibition Services Pte Ltd.  
Website: <http://www.communicasia.com>

## Resources & Key Contacts

Key Contacts:  
Communications Association of Hong Kong  
GPO Box 13461 Hong Kong  
Phone: (852) 2504-2732  
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Website: [www.cahk.hk](http://www.cahk.hk)  
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Hong Kong Wireless Technology Industry Association  
Unit 403, IT Street, Cyberport 3  
100 Cyberport Road, Hong Kong  
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Website: [www.hkwtia.org](http://www.hkwtia.org)  
Email: [contact@hkwtia.org](mailto:contact@hkwtia.org)

The Society of Hong Kong External Telecommunications Service Providers  
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Phone: (852) 8100-2555  
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## For More Information

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